

AMENDMENTS TO THE CLAIMS

In the claims, please cancel claims 17, 28, 29, 31, 32, 35, 38, and 40 amend claims 13, 19, 20, 26, 27, 30, 33, 36, and 39 as follows:

1-12. (canceled)

13. (currently amended) A composition for delivery of a polynucleotide to a cell comprising: the polynucleotide and ~~an amphiphilic~~ a polyvinylether random copolymer, wherein the polyvinylether random copolymer comprises cationic monomeric units and alkyl or aryl monomeric units and is capable of lysing red blood cells.

14. (original) The composition of claim 13 wherein the polynucleotide is associated with the polyvinylether via an electrostatic interaction.

15. (original) The composition of claim 13 wherein the polynucleotide is associated with the polyvinylether via a covalent linkage.

16. (original) The composition of claim 15 wherein the polynucleotide is associated with the polyvinylether via a labile covalent linkage.

17-18. (canceled)

19. (currently amended) ~~[[The]] A composition of claim 13 wherein~~ for delivery of a polynucleotide to a cell comprising: the polynucleotide and a reversibly modified polyvinylether random copolymer wherein the reversibly modified polyvinylether random copolymer comprises a maleic anhydride modified polyvinylether hydrophobic monomeric units and maleic anhydride modified amine-containing monomeric units wherein:
a) the modified polyvinylether random copolymer is not membrane active and
b) cleavage of the maleic anhydrides from the amine-containing monomeric units results in an unmodified polyvinylether random copolymer that is membrane active and capable of lysing red blood cells.

20. (currently amended) The composition of claim 19 wherein the reversibly modified polyvinylether random copolymer consists of an anionic polyvinylether.

21. (canceled)

22. (original) The composition of claim 13 wherein the polynucleotide is selected from the list consisting of: DNA, plasmid DNA, linear DNA, dsDNA, ssDNA, RNA, expression cassette, antisense oligonucleotide, siRNA, microRNA, RNA expression cassette, ribozyme, dsRNA, and synthetic polynucleotides.

23. (original) The composition of claim 22 wherein the polynucleotide expresses a protein.
24. (original) The composition of claim 22 wherein the polynucleotide expresses an RNA.
25. (original) The composition of claim 22 wherein the polynucleotide inhibits expression of a gene in the cell.
26. (currently amended) The composition of claim 13 wherein the polyvinylether random copolymer ~~consists of a~~ is reversibly modified polyvinylether.
27. (currently amended) The composition of claim 26 wherein the reversibly modified polyvinylether random copolymer ~~consists of an~~ is anionic ~~polyvinylether~~.
- 28-29. (canceled)
30. (currently amended) The composition of claim 26 wherein the polynucleotide is covalently linked to the reversibly modified polyvinylether random copolymer.
- 31-32. (canceled)
33. (currently amended) The composition of claim ~~[[32]]~~ 31 wherein the cationic monomeric units consist of amine-containing monomeric units.
34. (previously presented) The composition of claim 13 wherein the polyvinylether random copolymer comprises cationic monomeric units and at least two classes of alkyl or aryl monomeric units.
35. (canceled)
36. (currently amended) The composition of claim ~~[[35]]~~ 34 wherein the cationic monomeric units consist of amine-containing monomeric units.
37. (previously presented) The composition of claim 36 wherein the alkyl monomeric units contain alkyl groups selected from the group consisting of: ethyl, propyl, butyl, dodecyl, and octadecyl.
38. (canceled)
39. (currently amended) The composition of claim ~~[[38]]~~ 26 wherein ~~the reversibly modified~~ modifying the polyvinylether random copolymer consists of reacting a plurality of amine-containing monomeric units ~~consist of with maleic anhydrides modified amine-containing monomeric units~~.
40. (canceled)